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Fath

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(54) **FOLDED MERCHANDISING UNIT AND BLANK**

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B65D 5/42	(2006.01)
B65D 5/52	(2006.01)
B65D 5/02	(2006.01)

(52) **U.S. Cl.**

CPC .. ***B65D 5/42*** (2013.01); ***B65D 5/52*** (2013.01); ***B65D 5/0254*** (2013.01); ***B65D 5/4208*** (2013.01); ***B65D 5/443*** (2013.01)

USPC **206/45.29**; 206/750

(58) **Field of Classification Search**

USPC 206/45.23, 45.24, 45.29, 738, 739, 206/745–750; 229/122

See application file for complete search history.

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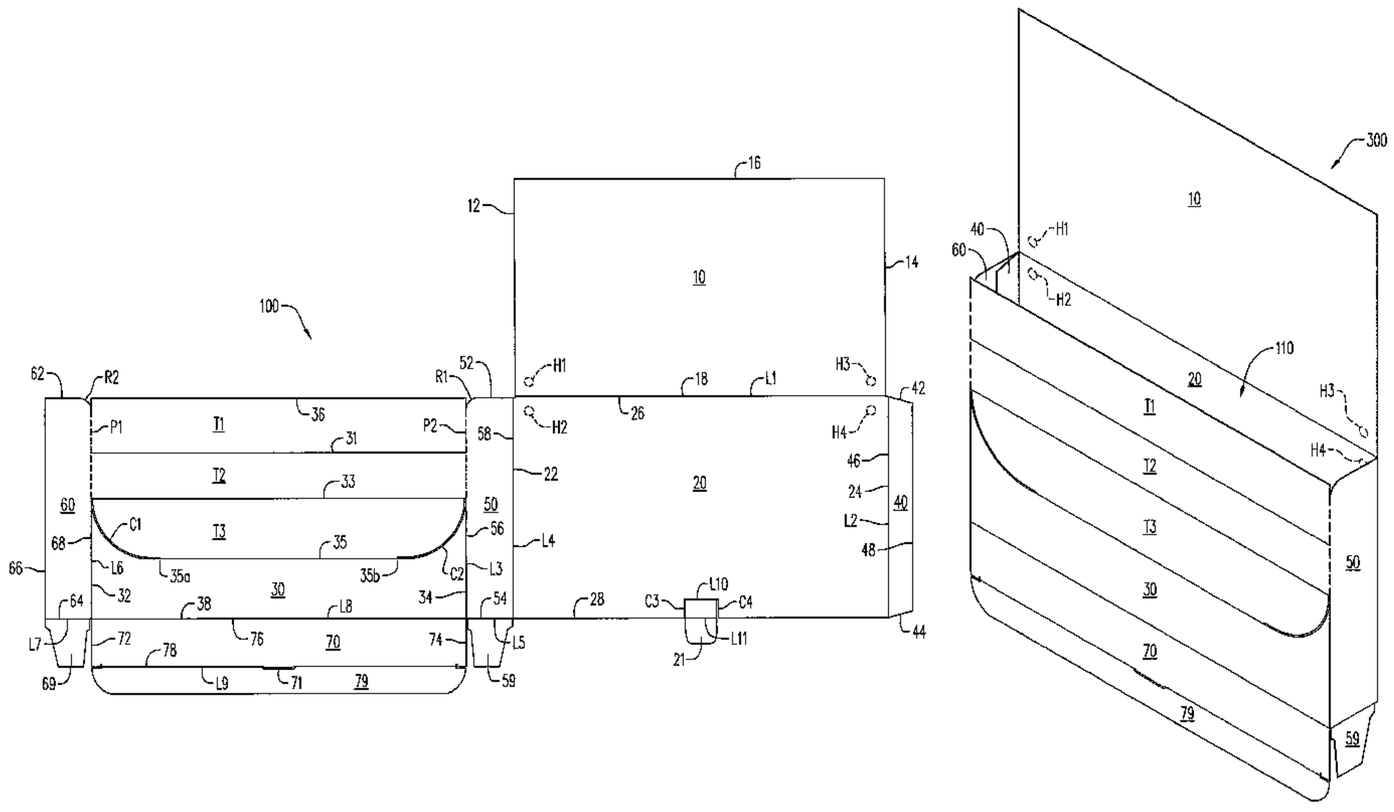
(57) **ABSTRACT**

A display unit including a front panel, an outer back panel, a bottom panel and side panels; first, second and third connected reinforcing panel sections folded into superposing relation to the outer back panel, the bottom panel and the front panel, respectively, such that a double-panel reinforcement is established on a portion of the display unit; wherein the first, second and third connected reinforcing panel sections are also connected with the front panel along a first fold line defined between the front panel and the third reinforcing panel section; an inner back panel is connected and folded into superposing relation with the outer back panel along a second fold line; and wherein a depth of the display unit is defined between the front panel and the outer back panel and the second connected reinforcing panel section extends an entirety of the depth between the front panel and the outer back panel.

22 Claims, 5 Drawing Sheets



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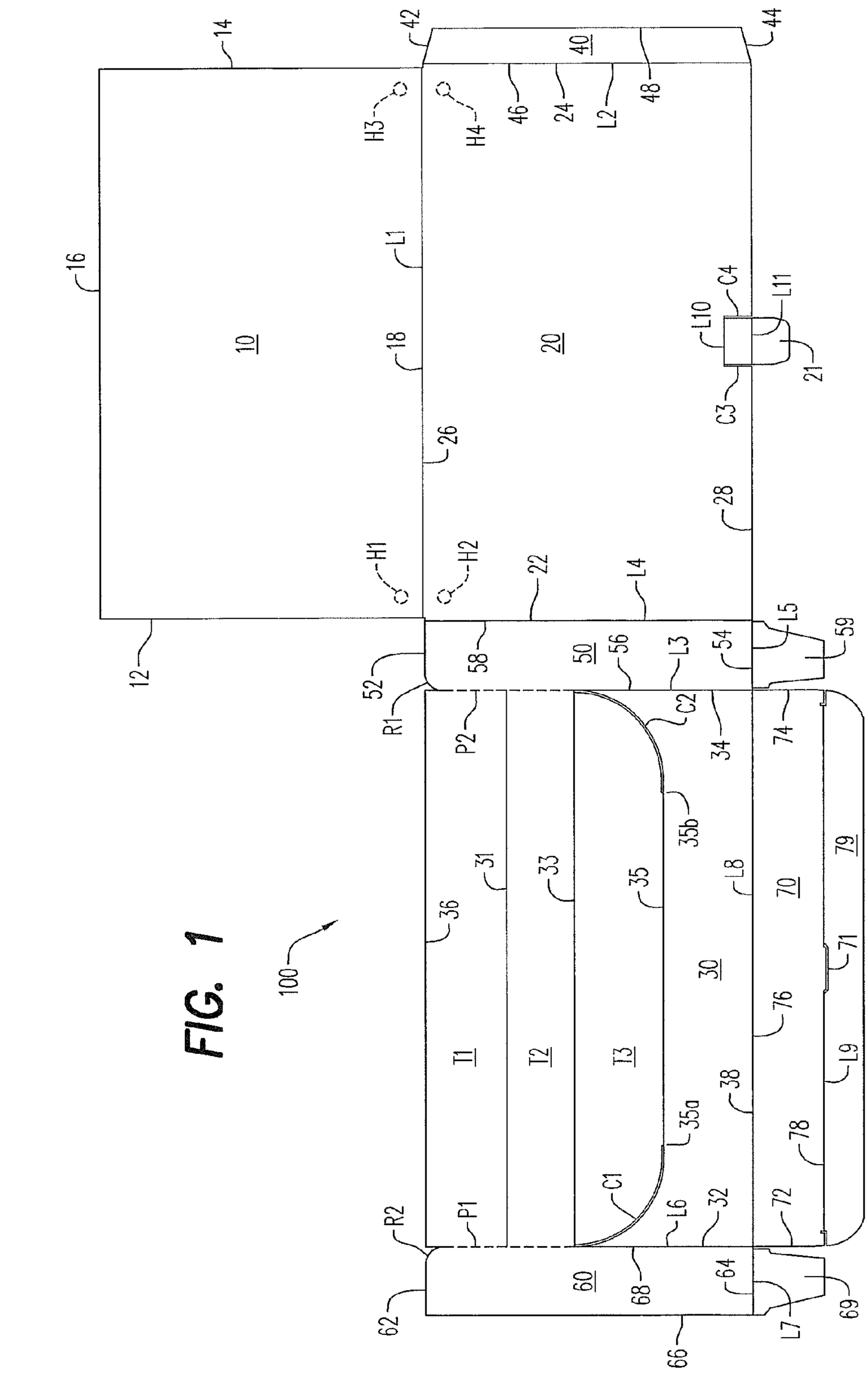
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FIG. 1

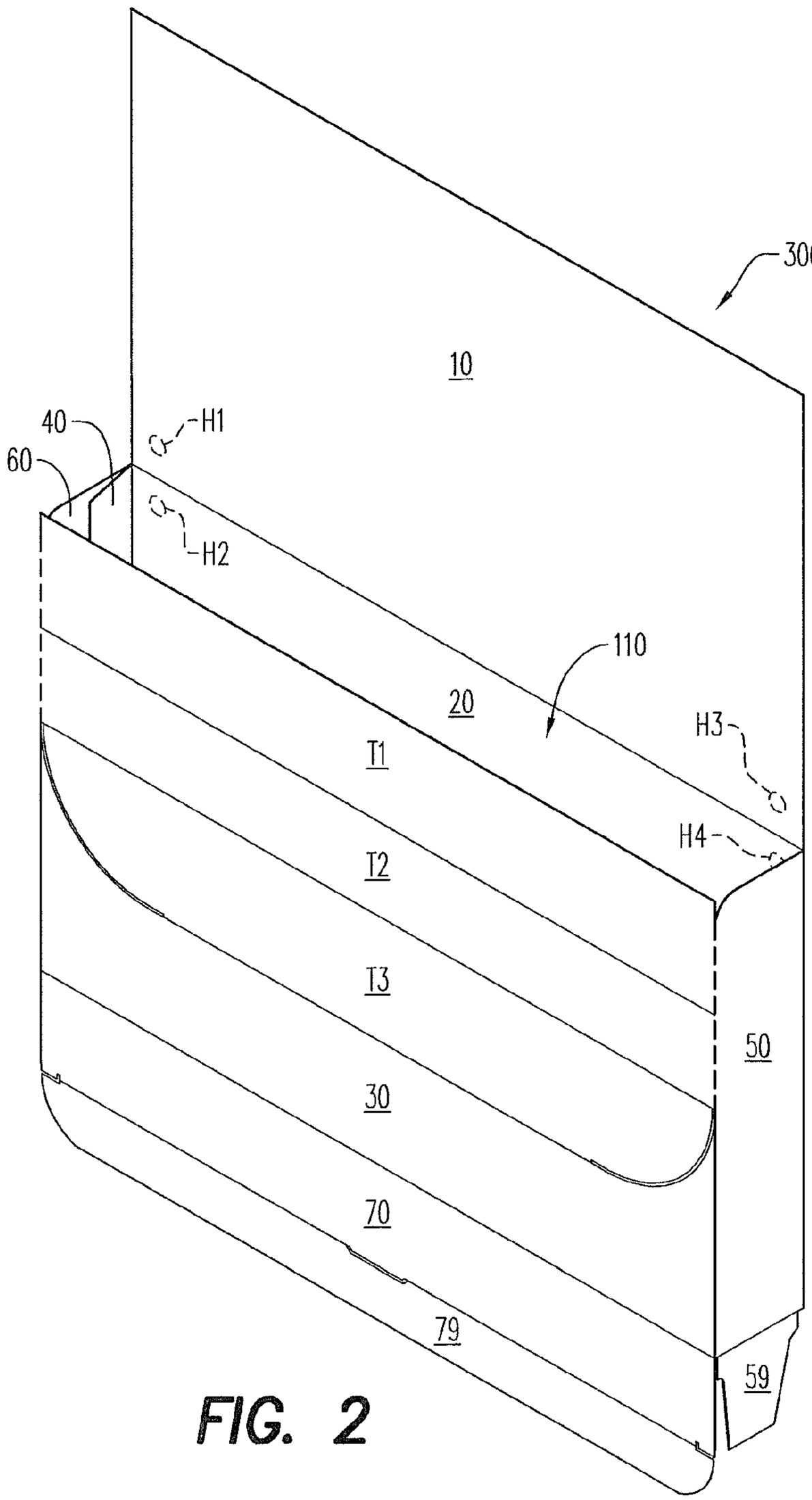

FIG. 2

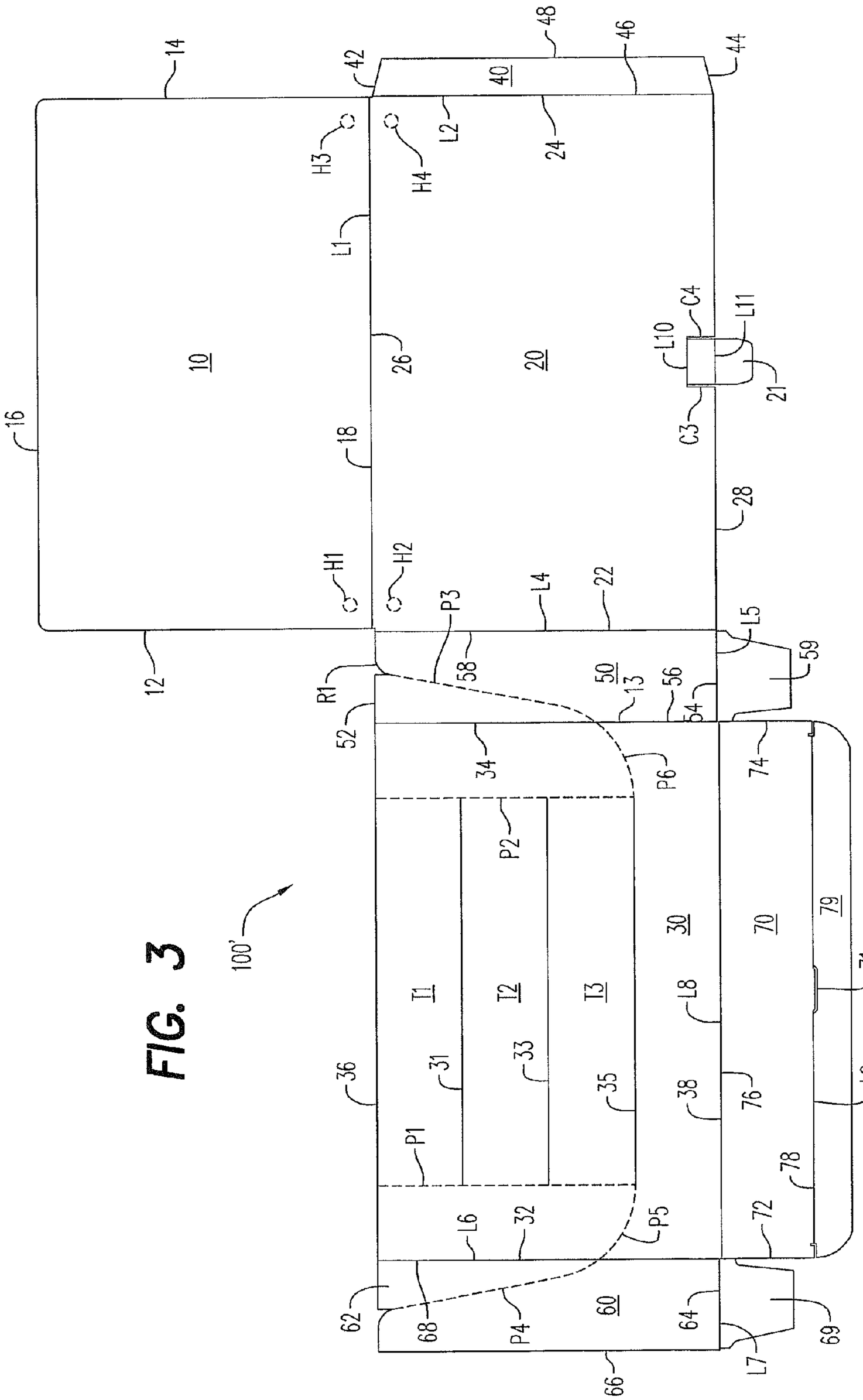
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FIG. 3

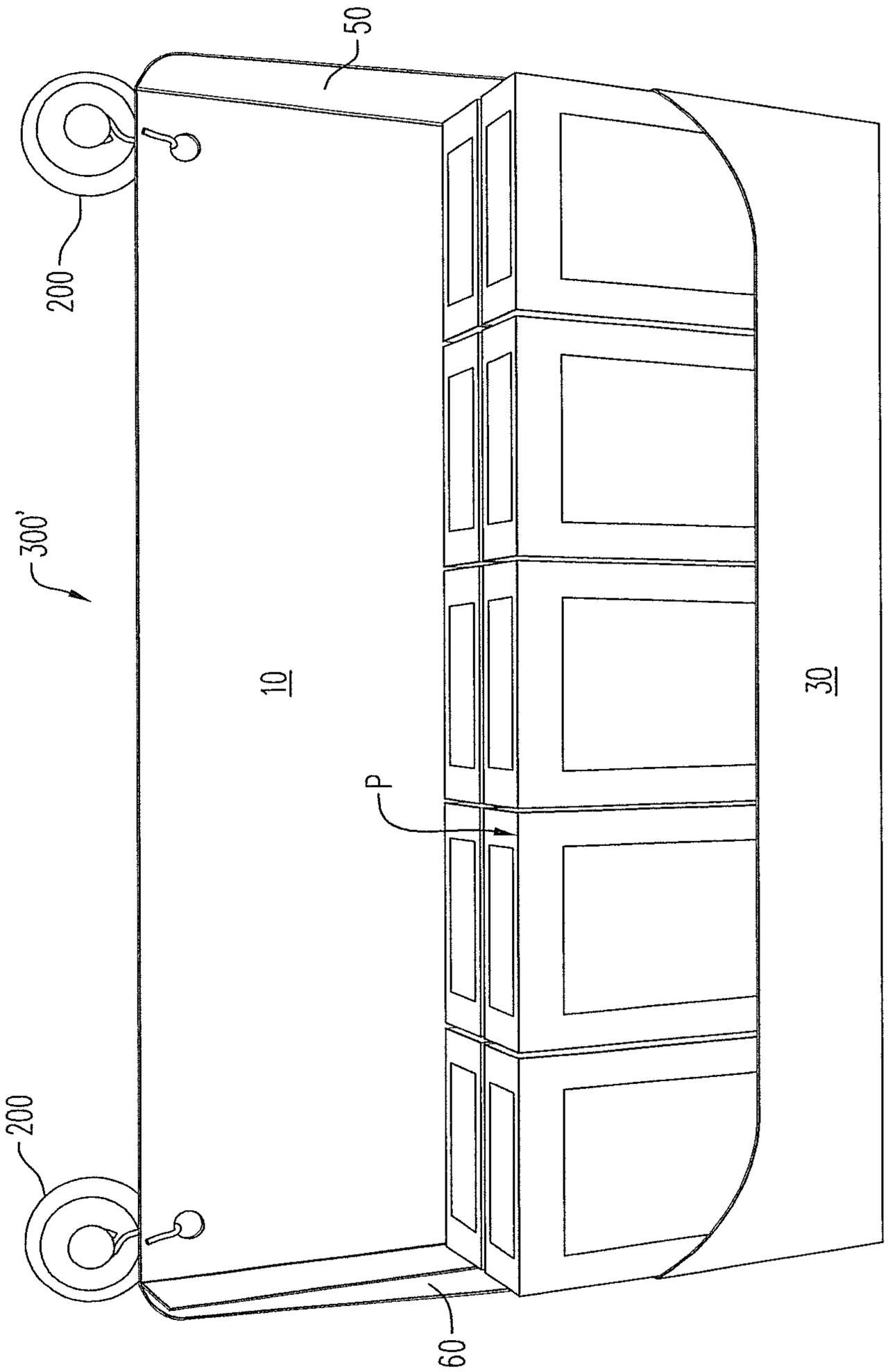

FIG. 4

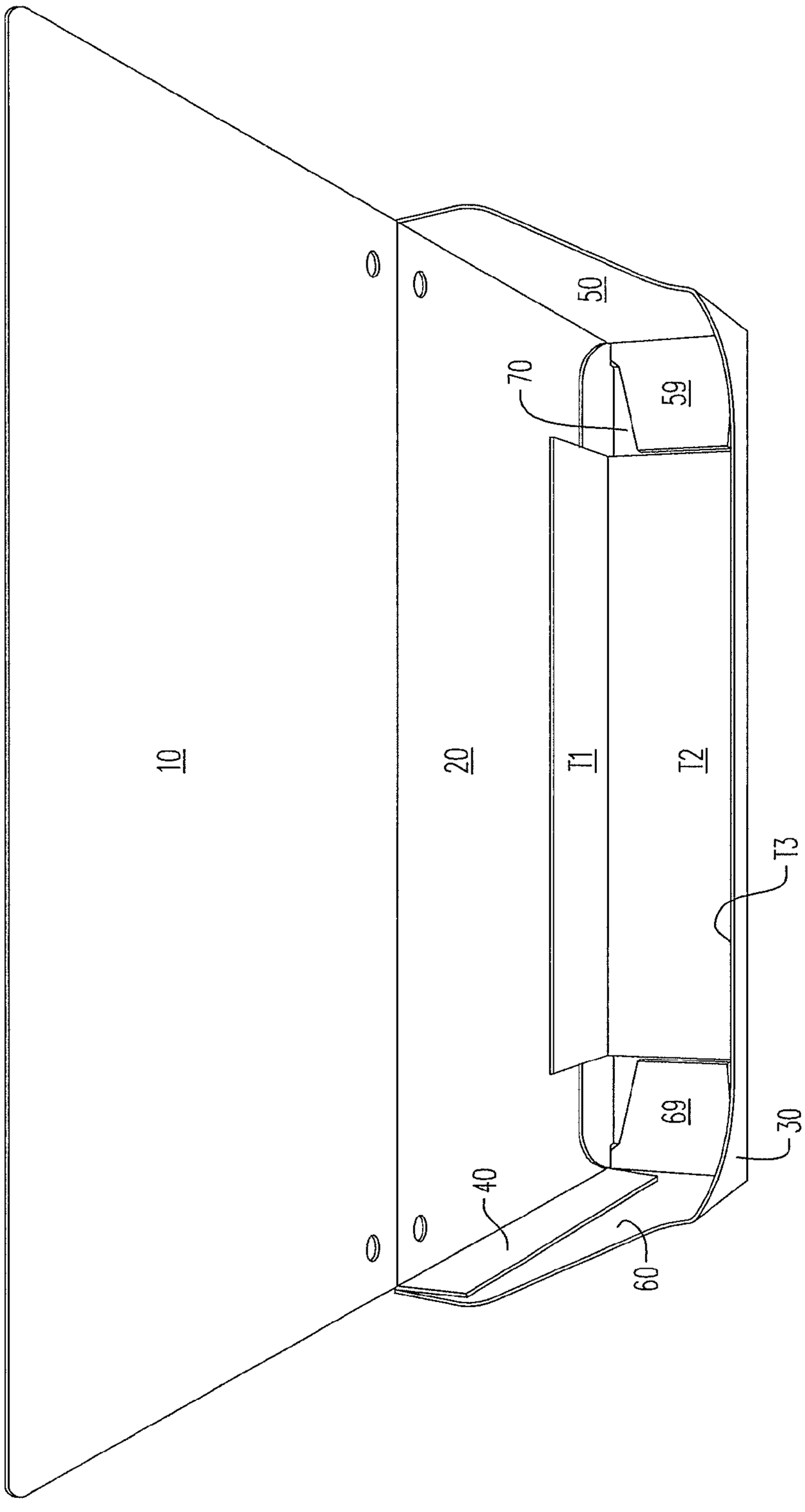

FIG. 5

FOLDED MERCHANDISING UNIT AND BLANK

FIELD OF THE INVENTION

A wide variety of different types of merchandising units are used to store, dispense, and display consumer goods at the point of sale. For example, in shops and kiosks, the majority of consumer goods are displayed on free standing counter top displays or similar wall mounted display units. However, it may be desirable to dispense certain items from units provided inside the kiosk or behind the counter top area. In such instance, it may be preferred to allow consumers to still view the goods, but not have them directly accessible by the consumer.

WORKING ENVIRONMENT

It would be desirable to provide a novel merchandising unit for consumer goods and in particular, for smoking articles, which provides increased flexibility in the display and access of the consumer goods at the point of sale.

The present invention relates to a folded merchandising unit adapted to be glued and shipped in a folded state and erected at a point of sale into a merchandising display carton. The invention finds particular application as a merchandising unit for smoking articles.

SUMMARY OF THE INVENTION

Disclosed herein is a merchandising unit, i.e., display carton, particularly suited for packages of smoking articles, as well as smokeless tobacco products, or any other types of consumer goods.

According to one embodiment, a display (merchandising) unit includes a front panel, an outer back panel, a bottom panel and side panels; first, second and third connected reinforcing panel sections folded into superposing relation to said outer back panel, said bottom panel and said front panel, respectively, said first, second and third connected reinforcing panels also being connected with said front panel along a first fold line defined between said front panel and said third panel section; an inner back panel connected and folded into superposing relation with said outer back panel along a second fold line; whereby a double-panel reinforcement of the display unit is established.

A further embodiment provides a method of establishing a double-panel reinforcement of a display unit, comprising establishing a box structure comprising a front panel, an outer back panel, a bottom panel and side panels; folding first, second and third connected reinforcing panel sections into superposing relation to said outer back panel, said bottom panel and said front panel, respectively, said folding including folding along a first fold line defined between said front panel and said third panel section; and folding an inner back panel into superposing relation with said outer back panel along a second fold line.

According to one embodiment, a carton blank is adapted to be glued and shipped in a folded condition and erected at a point of sale into a merchandising display carton. The carton blank comprises a first rectangular panel having first and second short ends and first and second long ends, the first and second short ends being free ends and the first long end being a free end; a second rectangular panel having first and second short ends and first and second long ends, the first long end of the second rectangular panel hingedly connected to the second long end of the first rectangular panel along a first fold line; a third rectangular panel having first and second short ends and first and second long ends; a glue flap having first and second short ends and first and second long ends, the first long end of the glue flap hingedly connected to the second short end of the second rectangular panel along a second fold line, the second long end being a free end, and the first and second short ends being free ends; a first side panel having first and second short ends and first and second long ends, the first long end of the first side panel hingedly connected to the second short end of the third rectangular panel along a third fold line, the second long end of the first side panel hingedly connected to the first short end of the second rectangular panel along a fourth fold line, the second short end of the first side panel hingedly connected to a first dust flap along a fifth fold line and the first short end of the first side panel being a free end; a second side panel having first and second short ends and first and second long ends, the second long end of the second side panel hingedly connected to the first short end of the third rectangular panel along a sixth fold line, the second short end of the second side panel hingedly connected to a second dust flap along a seventh fold line and the first short end and first long end of the second side panel being free ends; a bottom panel having first and second short ends and first and second long ends, the first long end of the bottom panel hingedly connected to the second long end of the third rectangular panel along an eighth fold line, the second long end of the bottom panel hingedly connected to a tuck flap along a ninth fold line, and the first and second short ends of the bottom panel being free ends; and the third rectangular panel having first, second and third score lines parallel to the first and second long ends of the third rectangular panel and first and second perforated lines extending from the first long end and perpendicular to the first, second and third score lines to form first, second and third foldable inner reinforcement sections which are located inside the display carton when the display carton is erected; wherein the glue flap is adapted to be glued to an inside of the second side flap so as to provide a carton blank in a folded condition which can be erected to form a merchandising display carton by folding the first and second side panels at an angle of 90° with respect to the second and third rectangular panels and form a rectangular opening between the first and second side panels and between the second and third rectangular panels, folding the first and second dust flaps by an angle of 90° with respect to the first and second side panels so as to overlie a bottom of the rectangular opening, folding the tuck flap by an angle of 90° with respect to the bottom flap and folding the bottom flap by an angle of 90° with respect to the third rectangular panel so as to overlie the bottom of the rectangular opening with the tuck flap against an inside of the second rectangular panel, and folding the first rectangular panel by an angle of 180° with respect to the second rectangular panel so as to be inside the rectangular opening against the second rectangular panel **20**.

According to another embodiment, the carton blank further comprises a third perforated line in the first side panel, the third perforated line extending from the first short end of the first side panel to a fold line between the first side panel and the third rectangular panel; a fourth perforated line in the second side panel, the fourth perforated line extending from the first short end of the second side panel to a fold line between the second side panel and the third rectangular panel; a fifth perforated line extending between the fourth perforated line and the first perforated line; and a sixth perforated line extending between the second perforated line and the third perforated line, the first through sixth perforated lines allowing sections of the carton blank to be removed while leaving the three reinforcement sections, which fold about the first,

second and third score lines such that the first reinforcement section abuts the second rectangular panel, the second reinforcement section abuts the bottom panel and the third reinforcement section abuts the third rectangular panel.

According to another embodiment, a method of erecting the glued and folded display carton comprises folding the first and second side panels at an angle of 90° with respect to the second and third rectangular panels and forming a rectangular opening between the first and second side panels and between the second and third rectangular panels; folding the first and second dust flaps by an angle of 90° with respect to the first and second side panels so as to overlie a bottom of the rectangular opening; folding the tuck flap by an angle of 90° with respect to the bottom flap; folding the bottom flap by an angle of 90° with respect to the third rectangular panel so as to overlie the bottom of the rectangular opening with the tuck flap against an inside of the second rectangular panel; folding the first rectangular panel by an angle of 180° with respect to the second rectangular panel so as to be inside the rectangular opening against the second rectangular panel; separating the first, second and third reinforcement sections from remaining portions of the carton blank by tearing the carton blank along the first and second perforation lines; folding the first reinforcement section 90° with respect to the second reinforcement section; folding the second reinforcement section 90° with respect to the third reinforcement section; folding the third reinforcement section 180° about the third score line such that the third reinforcement section abuts an inside of a lower portion of the third rectangular panel, the second reinforcement section abuts the bottom panel, and the first reinforcement section abuts a lower portion of the second rectangular panel.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

FIG. **1** shows a planar view of a blank for a merchandising unit in an unfolded state according to one embodiment.

FIG. **2** shows a perspective view of the blank in a glued and folded state.

FIG. **3** shows a planar view of a blank for a merchandising unit in an unfolded state according to a further embodiment.

FIG. **4** shows the merchandising unit in an erected state.

FIG. **5** shows the blank of FIG. **3** in a partially erected state of forming the merchandising unit.

DETAILED DESCRIPTION OF THE INVENTION

Referring to FIGS. **1-2**, a carton blank **100** for a merchandising unit **300** is described herein. The blank **100** comprises a first (inner) back rectangular panel **10**, a second (outer) back rectangular panel **20** and a third rectangular panel **30**. The first rectangular panel **10** has first and second short ends **12**, **14** and first and second long ends (or "edge portions") **16**, **18**, the first and second short ends **12**, **14** being free ends and the first long end **16** being a free end. The second rectangular panel **20** has first and second short ends **22**, **24** and first and second long ends **26**, **28**, the first long end **26** of the second rectangular panel being hingedly connected to the second long end **18** of the first rectangular panel **10** along a first fold line L**1**. The third rectangular panel **30** has first and second short ends **32**, **34** and first and second long ends **36**, **38**.

The blank **100** further comprises a glue flap **40**, a first side panel **50**, a second side panel **60**, and a bottom panel **70**. The glue flap **40** has first and second short ends **42**, **44** and first and second long ends **46**, **48**, the first long end **46** of the glue flap being hingedly connected to the second short end **24** of the second rectangular panel **20** along a second fold line L**2**, the second long end **48** being a free end, and the first and second short ends **42**, **44** being free ends. The first side panel **50** has first and second short ends **52**, **54** and first and second long ends **56**, **58**, the first long end **56** of the first side panel **50** being hingedly connected to the second short end **34** of the third rectangular panel **30** along a third fold line L**3**, the second long end **58** of the first side panel **50** being hingedly connected to the first short end **22** of the second rectangular panel **20** along a fourth fold line L**4**, and the second short end **54** of the first side panel **50** being hingedly connected to a first dust flap **59** along a fifth fold line L**5** and the first short end **52** of the first side panel **50** being a free end. The second side panel **60** has first and second short ends **62**, **64** and first and second long ends **66**, **68**, the second long end **68** of the second side panel **60** being hingedly connected to the first short end **32** of the third rectangular panel **30** along a sixth fold line L**6**, the second short end **64** of the second side panel **60** being hingedly connected to a second dust flap **69** along a seventh fold line L**7** and the first short end **62** and first long end **66** of the second side panel **60** being free ends. The bottom panel **70** has first and second short ends **72**, **74** and first and second long ends **76**, **78**, the first long end **76** of the bottom panel **70** being hingedly connected to the second long end **38** of the third rectangular panel **30** along an eighth fold line L**8**, the second long end **78** of the bottom panel **70** being hingedly connected to a tuck flap **79** along a ninth fold line L**9**, and the first and second short ends **72**, **74** of the bottom panel **70** being free ends.

As shown best in FIG. **1**, the third rectangular panel **30** has first, second and third score (fold) lines **31**, **33**, **35** extending transversely and parallel to the first and second long ends **36**, **38** thereof in order to facilitate folding of the third rectangular panel **30** therealong, as described further below. The third rectangular panel **30** also includes first and second perforated lines P**1**, P**2** extending from the first long end **36** and perpendicular to the first, second and third score (fold) lines **31**, **33**, **35** to form, when broken, first, second and third foldable inner reinforcement sections T**1**, T**2**, T**3**. The carton blank **100** further comprises first and second cut lines C**1**, C**2** in the third rectangular panel **30**, the first cut line C**1** extending from the first perforated line P**1** to one end **35***a* of the third score line **35** and the second cut line C**2** extending from the second perforated line P**2** to an opposite end **35***b* of the third score line **35**, the perforated lines P**1**, P**2** and the cut lines C**1**, C**2** allowing the three reinforcement sections T**1**, T**2**, T**3** to be separated from the first and second side panels **50**, **60** and folded about the first, second and third score lines **31**, **33**, **35** such that the first reinforcement section T**1** abuts the second rectangular panel **20**, the second reinforcement section T**2** abuts the bottom panel **70** and the third reinforcement section T**3** abuts the third rectangular panel **30** when the unit is erected. The first, second and third reinforcement sections T**1**-T**3**, can thus be folded into the interior of the erected merchandising unit to provide, together with back panels **10** and **20** when folded, a double-wall thickness along the front, bottom and back portions of the unit.

The glue flap **40** is adapted to be glued to an inner or inside surface of the second side panel **60** so as to provide an erectable carton blank structure in a folded condition which can be erected to form the display carton or merchandising unit **300**. Hence, the carton blank is configured to be readily glued and folded into a collapsed state to facilitate shipping to the sales force, and the collapsed unit is readily erected in the field. More particularly, fold lines L**2**, L**3**, L**4** and L**6** are preferably pre-broken by folding 180°, fold lines L**4** and L**6** are then folded 180° and glue flap **40** is glued to the inner surface of

second side panel **60** to form a glued and folded blank structure. With reference to FIG. **2**, the glued and folded blank **100** is erected by folding the first and second side panels **50**, **60** at an angle of 90° with respect to the second and third rectangular panels **20**, **30** to form a rectangular opening **110** between the first and second side panels **50**, **60** and between the second and third rectangular panels **20**, **30**. Thereafter, the first and second dust flaps **59**, **69** are folded by an angle of 90° with respect to the first and second side panels **50**, **60** so as to overlie a bottom of the rectangular opening **110**, the tuck flap **79** is folded by an angle of 90° with respect to the bottom flap **70** and the bottom flap **70** is folded by an angle of 90° with respect to the third rectangular panel **30** so as to overlie the bottom of the rectangular opening **110** with the tuck flap **79** against an inside of the second rectangular panel **20**. The first rectangular panel **10** is then folded by an angle of 180° with respect to the second rectangular panel **20** so as to be inside the rectangular opening **110** and disposed against the second rectangular panel **20**. The folded over first rectangular panel **10** thus provides a double wall thickness and additional strength and support to the back portion of the erected merchandising unit.

The carton blank **100** further comprises a locking tab **21** extending from the second long end **28** of the second rectangular panel **20** and a slit **71** along fold line L**9** between the bottom panel **70** and the tuck flap **79**. The locking tab **21** is configured to fit into the slit **71** when the carton blank is erected. The locking tab **21** is hingedly connected to the second rectangular panel about a tenth fold line L**10** and is foldable about an eleventh fold line L**11** parallel to the tenth fold line L**10**, the locking tab being defined by cut lines C**3**, C**4** in the second rectangular panel extending between the tenth fold line L**10** and the eleventh fold line L**11**.

The carton blank **100** further comprises a first hole H**1** in the first rectangular panel **10** and a second hole H**2** in the second rectangular panel **20**, the first and second holes H**1**, H**2** forming a first axially aligned mounting hole when the first rectangular panel **10** is folded over the second rectangular panel **20**. Also shown are a third hole H**3** in the first rectangular panel **10** and a fourth hole H**4** in the second rectangular panel **20**, the third and fourth holes H**3**, H**4** forming a second axially aligned mounting hole when the first rectangular panel **10** is folded over the second rectangular panel **20**. The first and second holes H**1**, H**2** are equidistant to the first and fourth fold lines L**1**, L**4** and the third and fourth holes H**3**, H**4** are equidistant to the first and second fold lines L**1**, L**2**. The holes accommodate mounting the fully erected unit to be hung from hooks or wire.

The first side panel **50** includes a first rounded corner R**1** extending between the second perforation line P**2** and the first short end **52** of the first side panel **50** and the second side panel **60** includes a second rounded corner R**2** extending between the first second perforation line P**1** and the first short end **62** of the first side panel **60**.

Referring to FIG. **3**, a carton blank **100'** according to another embodiment is shown, like reference numerals being used to refer to like elements shown in FIGS. **1-2**. As in the previous embodiment, the blank **100'** comprises a first (inner) rectangular panel **10**, a second (outer) rectangular panel **20** and a third rectangular panel **30**. The first rectangular panel **10** has first and second short ends (or "edge portions") **12**, **14** and first and second long ends **16**, **18**, the first and second short ends **12**, **14** being free ends and the first long end **16** being a free end. The second rectangular panel **20** has first and second short ends **22**, **24** and first and second long ends **26**, **28**, the first long end **26** of the second rectangular panel being hingedly connected to the second long end **18** of the first rectangular panel **10** along a first fold line L**1**. The third rectangular panel **30** has first and second short ends **32**, **34** and first and second long ends **36**, **38**.

The blank **100** further comprises a glue flap **40**, a first side panel **50**, a second side panel **60**, and a bottom panel **70**. The glue flap **40** has first and second short ends **42**, **44** and first and second long ends **46**, **48**, the first long end **46** of the glue flap being hingedly connected to the second short end **24** of the second rectangular panel **20** along a second fold line L**2**, the second long end **48** being a free end, and the first and second short ends **42**, **44** being free ends. The first side panel **50** has first and second short ends **52**, **54** and first and second long ends **56**, **58**, the first long end **56** of the first side panel **50** being hingedly connected to the second short end **34** of the third rectangular panel **30** along a third fold line L**3**, the second long end **58** of the first side panel **50** being hingedly connected to the first short end **22** of the second rectangular panel **20** along a fourth fold line L**4**, and the second short end **54** of the first side panel **50** being hingedly connected to a first dust flap **59** along a fifth fold line L**5** and the first short end **52** of the first side panel **50** being a free end. The second side panel **60** has first and second short ends **62**, **64** and first and second long ends **66**, **68**, the second long end **68** of the second side panel **60** being hingedly connected to the first short end **32** of the third rectangular panel **30** along a sixth fold line L**6**, the second short end **64** of the second side panel **60** being hingedly connected to a second dust flap **69** along a seventh fold line L**7** and the first short end **62** and first long end **66** of the second side panel **60** being free ends. The bottom panel **70** has first and second short ends **72**, **74** and first and second long ends **76**, **78**, the first long end **76** of the bottom panel **70** being hingedly connected to the second long end **38** of the third rectangular panel **30** along an eight fold line L**8**, the second long end **78** of the bottom panel **70** being hingedly connected to a tuck flap **79** along a ninth fold line L**9**, and the first and second short ends **72**, **74** of the bottom panel **70** being free ends.

As shown in FIG. **3**, the third rectangular panel **30** has first, second and third score (fold) lines **31**, **33**, **35** extending transversely and parallel to the first and second long ends **36**, **38** thereof in order to facilitate folding of the third rectangular panel **30** therealong, as described further below. The third rectangular panel **30** also includes first and second perforated lines P**1**, P**2** extending from the first long end **36** and perpendicular to the first, second and third score (fold) lines **31**, **33**, **35** to form, when broken, first, second and third foldable inner reinforcement sections T**1**, T**2**, T**3** which are located inside the display carton when the display carton is erected. Blank **100'** further comprises a third perforated line P**3** in the first side panel **50**, the third perforated line P**3** extending from the first short end **52** of the first side panel **50** to fold line L**3** between the first side panel **50** and the third rectangular panel **30**, a fourth perforated line P**4** in the second side panel **60**, the fourth perforated line P**4** extending from the first short end **62** of the second side panel **60** to fold line L**6** between the second side panel **60** and the third rectangular panel **30**, a fifth perforated line P**5** extending between the fourth perforated line P**4** and the first perforated line P**1**, and a sixth perforated line P**6** extending between the second perforated line P**2** and the third perforated line P**3**. The perforated lines P**1**-P**6** allow sections of the carton blank **100'** to be completely removed while leaving the three reinforcement sections T**1**, T**2**, T**3** to be folded about the first, second and third score lines **31**, **33**, **35** such that the first reinforcement section T**1** abuts the second rectangular panel **20**, the second reinforcement section T**2** abuts the bottom panel **70** and the third reinforcement section T**3** abuts the third rectangular panel **30** when the unit

is erected, as shown in FIG. **5**. The first, second and third reinforcement sections T**1**-T**3**, can thus be folded into the interior of the erected merchandising unit to provide, together with back panels **10** and **20** when folded, a double-wall thickness along the front, bottom and back portions of the unit.

The glue flap **40** is adapted to be glued to an inner or inside surface of the second side panel **60** so as to provide an erectable carton blank structure in a folded condition which can be erected to form the display carton or merchandising unit **300'**. More particularly, fold lines L**2**, L**3**, L**4** and L**6** are preferably pre-broken by folding 180°, fold lines L**4** and L**6** are then folded 180° and glue flap **40** is glued to the inner surface of second side panel **60** to form a glued and folded blank structure. Hence, the carton blank is configured to be readily glued and folded into a collapsed state to facilitate shipping to the sales force, and the collapsed unit is readily erected in the field. The glued and folded blank **100'** is erected by preferably first removing the panels defined by the perforated lines P**1**-P**6**. Thereafter, with reference also to FIG. **2**, the blank **100'** is similarly erected by folding the first and second side panels **50**, **60** at an angle of 90° with respect to the second and third rectangular panels **20**, **30** to form a rectangular opening **110** between the first and second side panels **50**, **60** and between the second and third rectangular panels **20**, **30**. Thereafter, the first and second dust flaps **59**, **69** are folded by an angle of 90° with respect to the first and second side panels **50**, **60** so as to overlie a bottom of the rectangular opening **110**, the tuck flap **79** is folded by an angle of 90° with respect to the bottom flap **70** and the bottom flap **70** is folded by an angle of 90° with respect to the third rectangular panel **30** so as to overlie the bottom of the rectangular opening **110** with the tuck flap **79** against an inside of the second rectangular panel **20**. The first rectangular panel **10** is then folded by an angle of 180° with respect to the second rectangular panel **20** so as to be inside the rectangular opening **110** and disposed against the second rectangular panel **20**. The folded over first rectangular panel **10** thus provides a double wall thickness and additional strength and support to the back portion of the erected merchandising unit.

The carton blank **100'** further comprises a locking tab **21** extending from the second long end **28** of the second rectangular panel **20** and a slit **71** along fold line L**9** between the bottom panel **70** and the tuck flap **79**. The locking tab **21** is configured to fit into the slit **71** when the carton blank is erected. The locking tab **21** is hingedly connected to the second rectangular panel about a tenth fold line L**10** and is foldable about an eleventh fold line L**11** parallel to the tenth fold line L**10**, the locking tab being defined by cut lines C**3**, C**4** in the second rectangular panel extending between the tenth fold line L**10** and the eleventh fold line L**11**.

The carton blank **100'** further comprising a first hole H**1** in the first rectangular panel **10** and a second hole H**2** in the second rectangular panel **20**, the first and second holes H**1**, H**2** forming a first axially aligned mounting hole when the first rectangular panel **10** is folded over the second rectangular panel **20**. Also shown are a third hole H**3** in the first rectangular panel **10** and a fourth hole H**4** in the second rectangular panel **20**, the third and fourth holes H**3**, H**4** forming a second axially aligned mounting hole when the first rectangular panel **10** is folded over the second rectangular panel **20**. The first and second holes H**1**, H**2** are equidistant to the first and fourth fold lines L**1**, L**4** and the third and fourth holes H**3**, H**4** are equidistant to the first and second fold lines L**1**, L**2**.

The first side panel **50** includes a first rounded corner R**1** extending between the third perforation line P**3** and the first short end **52** of the first side panel **50** and the second side panel **60** includes a second rounded corner R**2** extending between the fourth perforation line P**4** and the first short end **62** of the first side panel **60**.

A method of erecting a folded carton blank **100** according to one embodiment comprises folding the first and second side panels **50**, **60** at an angle of 90° with respect to the second and third rectangular panels **20**, **30** so as to form a rectangular opening **110** between the first and second side panels **50**, **60** and between the second and third rectangular panels **20**, **30**. Thereafter, folding the first and second dust flaps **59**, **69** by an angle of 90° with respect to the first and second side panels **50**, **60** so as to overlie a bottom of the rectangular opening **110**. The tuck flap **79** is then folded by an angle of 90° with respect to the bottom flap **70** and the bottom flap **70** is folded by an angle of 90° with respect to the third rectangular panel **30** so as to overlie the bottom of the rectangular opening **110** with the tuck flap **79** against an inside of the second rectangular panel **20**. The first rectangular panel **10** is folded by an angle of 180° with respect to the second rectangular panel **20** so as to be inside the rectangular opening **110** against the second rectangular panel **20**. The first, second and third reinforcement sections T**1**, T**2**, T**3** are separated from the remaining portions of the carton blank **100** by breaking or tearing the carton blank along the first and second perforation lines P**1**, P**2**.

The method further comprises folding the first reinforcement section T**1** 90° with respect to the second reinforcement section T**2**; folding the second reinforcement section T**2** 90° with respect to the third reinforcement section T**3**; and folding the third reinforcement section T**3** 180° about the third score line **35** such that the third reinforcement section T**3** abuts an inside of a lower portion of the third rectangular panel **30**, the second reinforcement section T**2** abuts the bottom panel **70**, and the first reinforcement section T**1** abuts a lower portion of the second rectangular panel **20**. Preferably the first section T**1** is disposed between the back panels **20** and **10** when the latter panel is folded down. In the alternative, section T**1** may be disposed directly against the folded inner back panel **10**. The method further comprises inserting the locking tab **21** into the slit **71**.

A method of erecting a folded carton blank **100'** according to one embodiment comprises folding the first and second side panels **50**, **60** at an angle of 90° with respect to the second and third rectangular panels **20**, **30** so as to form a rectangular opening **110** between the first and second side panels **50**, **60** and between the second and third rectangular panels **20**, **30**. Thereafter, folding the first and second dust flaps **59**, **69** by an angle of 90° with respect to the first and second side panels **50**, **60** so as to overlie a bottom of the rectangular opening **110**. The tuck flap **79** is then folded by an angle of 90° with respect to the bottom flap **70** and the bottom flap **70** is folded by an angle of 90° with respect to the third rectangular panel **30** so as to overlie the bottom of the rectangular opening **110** with the tuck flap **79** against an inside of the second rectangular panel **20**. The first rectangular panel **10** is folded by an angle of 180° with respect to the second rectangular panel **20** so as to be inside the rectangular opening **110** against the second rectangular panel **20**. The first, second and third reinforcement sections T**1**, T**2**, T**3** are separated from the remaining portions of the carton blank **100** by tearing the carton blank **100'** along the perforation lines P**1**-P**6** and the material removed may be discarded.

Referring also to FIG. **5**, the method further comprises folding the first reinforcement section T**1** 90° with respect to the second reinforcement section T**2**; folding the second reinforcement section T**2** 90° with respect to the third reinforcement section T**3**; and folding the third reinforcement section

T3 180° about the third score line **35** such that the third reinforcement section T3 abuts an inside of a lower portion of the third rectangular panel **30**, the second reinforcement section T2 abuts the bottom panel **70**, and the first reinforcement section T1 abuts a lower portion of the second rectangular panel **20**. The method further comprises inserting the locking tab **21** into the slit **71**.

When erected, as shown in FIGS. **4** and **5**, the merchandising unit includes the glue flap **40** adhered to an inside of the second side flap **60**, and the first and second side panels **50**, **60** being at an angle of 90° with respect to the second and third rectangular panels **20**, **30** to form a rectangular opening **110** between the first and second side panels **50**, **60** and between the second and third rectangular panels **20**, **30**. The first and second dust flaps **59**, **69** are at an angle of 90° with respect to the first and second side panels **50**, **60** so as to overlie a bottom of the rectangular opening **110**, the bottom flap **70** is at an angle of 90° with respect to the third rectangular panel **30** and overlies the bottom of the rectangular opening **110** with the tuck flap **79** at an angle of 90° with respect to the bottom panel **70** and against an inside of the second rectangular panel **20**, and the first rectangular panel **10** is folded over the second rectangular panel **20** and located inside the rectangular opening **110** against the second rectangular panel **20**.

Referring to FIGS. **1** and **5**, the arcuate extent of cut lines C1 and C2 can be of sufficient length such that bottom section T2 may be disposed between dust flaps **59** and **69** so as to provide the unit with a bottom portion of generally uniform double thickness. Such arrangement promotes an even (level) display of product. Perforation (or cut) lines P5, P6 of FIG. **3** may be sized for similar purpose and effect. In the alternative, the arcuate extent of cut (perforated) lines C1 and C2 of FIG. **1** and the arcuate extent of perforated (or cut) lines P5 and P6 may be shortened so as to increase the transverse extent of the bottom section T2 and increase an overlap of section T2 over the dust flaps **59** and **69**, to enhance rigidity of the display structure.

The merchandising unit or display carton provides a large area on first rectangular panel **10** on which advertisements or merchandising information can be displayed and be viewed above the product P when it is loaded into the carton. The merchandising unit can be displayed on a counter top or, alternatively, holes H1-H4 allow suction cups **200** or other securing means to be used to hang the merchandising unit on a wall surface. Still further, if the merchandising unit is going to be maintained within a kiosk or the like, a rear surface (not shown) of second rectangular panel **20** can be provided with desired advertisements or information. When the merchandising unit is disposed with the rear surface abutting a transparent wall or window, the advertisements or information is viewable to the consumer outside of the kiosk yet the product within the unit can only be accessed by the employee working within the kiosk.

While the above blank for the merchandising unit and method of forming the same have been described in detail with reference to specific embodiments thereof, it will be apparent to those skilled in the art that various changes and modifications can be made, and equivalents employed, without departing from the scope of the appended claims.

What is claimed is:

1. A display unit comprising:

a front panel, an outer back panel, a bottom panel and side panels;

a first connected reinforcing panel section, a second connected reinforcing panel section and a third connected reinforcing panel section folded into superposing relation to said outer back panel, said bottom panel and said front panel, respectively, such that a double-panel reinforcement is established on a portion of the display unit;

wherein said first, second and third connected reinforcing panel sections are also connected with said front panel along a first fold line defined between said front panel and said third connected reinforcing panel section;

an inner back panel connected and folded into superposing relation with said outer back panel along a second fold line; and

wherein a depth of the display unit is defined between said front panel and said outer back panel and said second connected reinforcing panel section extends an entirety of the depth between said front panel and said outer back panel.

2. A method of establishing a double-panel reinforcement of a display unit, comprising:

providing a box structure comprising a front panel, an outer back panel an inner back panel, a bottom panel and side panels;

folding respective first, second and third connected reinforcing panel sections into superposing relation to said outer back panel, said bottom panel and said front panel, respectively, said folding including folding along a first fold line defined between said front panel and said third connected reinforcing panel section; and

folding said inner back panel into superposing relation with said outer back panel along a second fold line therebetween.

3. The method as claimed in claim **2**, further comprising at least partially establishing said first, second and third connected reinforcing panel sections by separating said first, second and third connected reinforcing panel sections from adjacent portions of said side panels.

4. A carton blank adapted to be glued and shipped in a folded condition and erected at a point of sale into a merchandising display carton, comprising:

a first rectangular panel having a first short end and a second short end and a first long end and a second long end, the first and second short ends being free ends and the first long end being a free end;

a second rectangular panel having a first short end and a second short end and a first long end and a second long end, the first long end of the second rectangular panel hingedly connected to the second long end of the first rectangular panel along a first fold line;

a third rectangular panel having a first short end and a second short end and a first long end and a second long end;

a glue flap having a first short end and a second short end and a first long end and a second long end, the first long end of the glue flap hingedly connected to the second short end of the second rectangular panel along a second fold line, the second long end being a free end, and the first and second short ends being free ends;

a first side panel having a first short end and a second short end and a first long end and a second long end, the first long end of the first side panel hingedly connected to the second short end of the third rectangular panel along a third fold line, the second long end of the first side panel hingedly connected to the first short end of the second rectangular panel along a fourth fold line, the second short end of the first side panel hingedly connected to a first dust flap along a fifth fold line and the first short end of the first side panel being a free end;

a second side panel having a first short end and a second short end and a first long end and a second long end, the second long end of the second side panel hingedly con-

nected to the first short end of the third rectangular panel along a sixth fold line, the second short end of the second side panel hingedly connected to a second dust flap along a seventh fold line and the first short end and first long end of the second side panel being free ends;

a bottom panel having a first short end and a second short end and a first long end and a second long end, the first long end of the bottom panel hingedly connected to the second long end of the third rectangular panel along an eighth fold line, the second long end of the bottom panel hingedly connected to a tuck flap along a ninth fold line, and the first and second short ends of the bottom panel being free ends; and

the third rectangular panel having first, second and third score lines parallel to the first and second long ends of the third rectangular panel and a first perforated line and a second perforated line extending from the first long end of the third rectangular panel and perpendicular to the first, second and third score lines to form a first foldable inner reinforcement section, a second foldable inner reinforcement section and a third foldable inner reinforcement section which are located inside the display carton when the display carton is erected;

wherein the glue flap is adapted to be glued to an inside of the second side panel so as to provide a carton blank in a folded condition which can be erected to form a merchandising display carton by folding the first and second side panels at an angle of 90° with respect to the second and third rectangular panels and form a rectangular opening between the first and second side panels and between the second and third rectangular panels, folding the first and second dust flaps by an angle of 90° with respect to the first and second side panels so as to overlie a bottom of the rectangular opening, folding the tuck flap by an angle of 90° with respect to the bottom flap and folding the bottom flap by an angle of 90° with respect to the third rectangular panel so as to overlie the bottom of the rectangular opening with the tuck flap against an inside of the second rectangular panel, and folding the first rectangular panel by an angle of 180° with respect to the second rectangular panel so as to be inside the rectangular opening against the second rectangular panel.

5. The carton blank of claim **4**, further comprising a locking tab extending from the second long end of the second rectangular panel and a slit along a fold line between the bottom panel and the tuck flap, the locking tab configured to fit into the slit when the carton blank is erected.

6. The carton blank of claim **5**, wherein the locking tab is hingedly connected to the second rectangular panel about a tenth fold line and is foldable about an eleventh fold line parallel to the tenth fold line, the locking tab being defined by third and fourth cut lines in the second rectangular panel extending between the tenth fold line and the eleventh fold line.

7. The carton blank of claim **4**, further comprising a third perforated line in the first side panel, the third perforated line extending from the first short end of the first side panel to a fold line between the first side panel and the third rectangular panel; a fourth perforated line in the second side panel, the fourth perforated line extending from the first short end of the second side panel to a fold line between the second side panel and the third rectangular panel; a fifth perforated line extending between the fourth perforated line and the first perforated line; and a sixth perforated line extending between the second perforated line and the third perforated line, the first through sixth perforated lines allowing sections of the carton blank to be removed while leaving the three foldable inner reinforcement sections, which fold about the first, second and third score lines such that the first foldable inner reinforcement section abuts the second rectangular panel, the second foldable inner reinforcement section abuts the bottom panel and the third foldable inner reinforcement section abuts the third rectangular panel.

8. The carton blank of claim **4**, further comprising a first cut line and a second cut line in the third rectangular panel, the first cut line extending from the first perforated line to one end of the third score line and the second cut line extending from the second perforated line to an opposite end of the third score line, the first and second perforated lines and the first and second cut lines allowing the three foldable inner reinforcement sections to be separated from the first and second side panels and folded about the first, second and third score lines such that the first reinforcement section abuts the second rectangular panel, the second reinforcement section abuts the bottom panel and the third reinforcement section abuts the third rectangular panel.

9. The carton blank of claim **4**, further comprising a first hole in the first rectangular panel and a second hole in the second rectangular panel, the first and second holes forming a first axially aligned mounting hole when the first rectangular panel is folded over the second rectangular panel.

10. The carton blank of claim **9**, further comprising a third hole in the first rectangular panel and a fourth hole in the second rectangular panel, the third and fourth holes forming a second axially aligned mounting hole when the first rectangular panel is folded over the second rectangular panel.

11. The carton blank of claim **9**, wherein the first and second holes are equidistant to the first and fourth fold lines and the third and fourth holes are equidistant to the first and second fold lines.

12. The carton blank of claim **4**, wherein the first side panel includes a first rounded corner extending between the second perforation line and the first short end of the first side panel and the second side panel includes a second rounded corner extending between the first perforation line and the first short end of the first side panel.

13. A folded merchandising unit comprising:

a first rectangular panel having a first short end and a second short end and a first long end and a second long end, the first and second short ends being free ends and the first long end being a free end;

a second rectangular panel having a first short end and a second short end and a first long end and a second long end, the first long end of the second rectangular panel hingedly connected to the second long end of the first rectangular panel along a first fold line;

a third rectangular panel having a first short end and a second short end and a first long end and a second long end;

a glue flap having a first short end and a second short end and a first long end and a second long end, the first long end of the glue flap hingedly connected to the second short end of the second rectangular panel along a second fold line, the second long end being a free end, and the first and second short ends being free ends;

a first side panel having a first short end and a second short end and a first long end and a second long end, the first long end of the first side panel hingedly connected to the second short end of the third rectangular panel along a third fold line, the second long end of the first side panel hingedly connected to the first short end of the second rectangular panel along a fourth fold line, the second short end of the first side panel hingedly connected to a

first dust flap along a fifth fold line and the first short end of the first side panel being a free end;

a second side panel having a first short end and a second short end and a first long end and a second long end, the second long end of the second side panel hingedly connected to the first short end of the third rectangular panel along a sixth fold line, the second short end of the second side panel hingedly connected to a second dust flap along a seventh fold line and the first short end and first long end of the second side panel being free ends;

a bottom panel having a first short end and a second short end and a first long end and a second long end, the first long end of the bottom panel hingedly connected to the second long end of the third rectangular panel along an eighth fold line, the second long end of the bottom panel hingedly connected to a tuck flap along a ninth fold line, and the first and second short ends of the bottom panel being free ends;

the third rectangular panel having first, second and third score lines parallel to the first and second long ends of the third rectangular panel and a first perforated line and a second perforated line extending from the first long end of the third rectangular panel and perpendicular to the first, second and third score lines to form first, second and third foldable inner reinforcement sections which are located inside the display carton;

wherein the glue flap is adhered to an inside of the second side panel, the first and second side panels are at an angle of 90° with respect to the second and third rectangular panels and form a rectangular opening between the first and second side panels and between the second and third rectangular panels, the first and second dust flaps are at an angle of 90° with respect to the first and second side panels so as to overlie a bottom of the rectangular opening, the bottom flap is at an angle of 90° with respect to the third rectangular panel and overlies the bottom of the rectangular opening with the tuck flap at an angle of 90° with respect to the bottom panel and against an inside of the second rectangular panel, and the first rectangular panel is folded over the second rectangular panel and located inside the rectangular opening against the second rectangular panel.

14. A method of erecting a folded carton blank comprising (a) a first rectangular panel having a first short end and a second short end and a first long end and a second long end, the first and second short ends being free ends and the first long end being a free end, (b) a second rectangular panel having a first short end and a second short end and a first long end and a second long end, the first long end of the second rectangular panel hingedly connected to the second long end of the first rectangular panel along a first fold line, (c) a third rectangular panel having a first short end and a second short end and a first long end and a second long end, (d) a glue flap having a first short end and a second short end and a first long end and a second long end, the first long end of the glue flap hingedly connected to the second short end of the second rectangular panel along a second fold line, the second long end being a free end, and the first and second short ends being free ends, (e) a first side panel having a first short end and a second short end and a first long end and a second long end, the first long end of the first side panel hingedly connected to the second short end of the third rectangular panel along a third fold line, the second long end of the first side panel hingedly connected to the first short end of the second rectangular panel along a fourth fold line, the second short end of the first side panel hingedly connected to a first dust flap along a fifth fold line and the first short end of the first side panel being a free end, (f) a second side panel having a first short end and a second short end and a first long end and a second long end, the second long end of the second side panel hingedly connected to the first short end of the third rectangular panel along a sixth fold line, the second short end of the second side panel hingedly connected to a second dust flap along a seventh fold line, the first short end and first long end of the second side panel being free ends and the second side panel adhered to the glue panel, (g) a bottom panel having a first short end and a second short end and a first long end and a second long end, the first long end of the bottom panel hingedly connected to the second long end of the third rectangular panel along an eighth fold line, the second long end of the bottom panel hingedly connected to a tuck flap along a ninth fold line, and the first and second short ends of the bottom panel being free ends, and (h) the third rectangular panel having first, second and third score lines parallel to the first and second long ends of the third rectangular panel and a first perforated line and a second perforated line extending from the first long end and perpendicular to the first, second and third score lines to form a first foldable inner reinforcement section, a second foldable inner reinforcement section and a third foldable inner reinforcement sections, the method comprising:

folding the first and second side panels at an angle of 90° with respect to the second and third rectangular panels and forming a rectangular opening between the first and second side panels and between the second and third rectangular panels;

folding the first and second dust flaps by an angle of 90° with respect to the first and second side panels so as to overlie a bottom of the rectangular opening;

folding the tuck flap by an angle of 90° with respect to the bottom flap;

folding the bottom flap by an angle of 90° with respect to the third rectangular panel so as to overlie the bottom of the rectangular opening with the tuck flap against an inside of the second rectangular panel;

folding the first rectangular panel by an angle of 180° with respect to the second rectangular panel so as to be inside the rectangular opening against the second rectangular panel;

separating the first, second and third reinforcement sections from remaining portions of the carton blank by tearing the carton blank along the first and second perforation lines;

folding the first reinforcement section 90° with respect to the second reinforcement section;

folding the second reinforcement section 90° with respect to the third reinforcement section;

folding the third reinforcement section 180° about the third score line such that the third reinforcement section abuts an inside of a lower portion of the third rectangular panel, the second reinforcement section abuts the bottom panel, and the first reinforcement section abuts a lower portion of the second rectangular panel.

15. The method of claim **14**, wherein the carton blank further comprises a locking tab extending from the second long end of the second rectangular panel and a slit along a fold line between the bottom panel and the tuck flap, the method further comprising inserting the locking tab into the slit.

16. The method of claim **15**, wherein the locking tab is hingedly connected to the second rectangular panel about a tenth fold line and is foldable about an eleventh fold line parallel to the tenth fold line, the locking tab being defined by third and fourth cut lines in the second rectangular panel

extending between the tenth fold line and the eleventh fold line, the method further comprising:

folding the locking tab 90° about the eleventh fold line when the locking tab is inserted in the slit.

17. The method of claim **14**, wherein the carton blank further comprises a third perforated line in the first side panel, the third perforated line extending from the first short end of the first side panel to a fold line between the first side panel and the third rectangular panel; a fourth perforated line in the second side panel, the fourth perforated line extending from the first short end of the second side panel to a fold line between the second side panel and the third rectangular panel, a fifth perforated line extending between the fourth perforated line and the first perforated line, and a sixth perforated line extending between the second perforated line and the third perforated line, the method further comprising:

tearing the carton blank along the first through sixth perforated lines to remove sections of the carton blank while leaving the three reinforcement sections free to fold about the first, second and third score lines such that the first reinforcement section abuts the second rectangular panel, the second reinforcement section abuts the bottom panel and the third reinforcement section abuts the third rectangular panel.

18. The method of claim **14**, wherein the carton blank further comprises a first cut line and a second cut line in the third rectangular panel, the first cut line extending from the first perforated line to one end of the third score line and the second cut line extending from the second perforated line to an opposite end of the third score line, the method further comprising:

tearing the carton blank along the first and second perforated lines and separating portions of the carton blank along the first and second cut lines such that the three reinforcement sections are separated from the first and second side panels and are free to be folded about the first, second and third score lines such that the first reinforcement section abuts the second rectangular panel, the second reinforcement section abuts the bottom panel and the third reinforcement section abuts the third rectangular panel.

19. The method of claim **14**, wherein the carton blank further comprises a first hole in the first rectangular panel and a second hole in the second rectangular panel, the method further comprising:

aligning the first and second holes to form a first axially aligned mounting hole when the first rectangular panel is folded over the second rectangular panel.

20. The method of claim **19**, wherein the carton blank further comprises a third hole in the first rectangular panel and a fourth hole in the second rectangular panel, the method further comprising:

aligning the third and fourth holes to form a second axially aligned mounting hole when the first rectangular panel is folded over the second rectangular panel.

21. The method of claim **20**, wherein the first and second holes are equidistant to the first and fourth fold lines and the third and fourth holes are equidistant to the first and second fold lines.

22. The method of claim **14**, wherein the first side panel includes a first rounded corner extending between the second perforation line and the first short end of the first side panel and the second side panel includes a second rounded corner extending between the first perforation line and the first short end of the first side panel.

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